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BUREAU OF BIOLOGICAL SURVEY

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FIELD DIARY

Mr. E. A. Goldman

(Official title.)

Period, Jan. 20 to Feb. 19, 1926

Mexico
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Jan. 20, 1925

Left Washington, D.C., 9.35 P.M.
for Austin, Tex., en route to the
city of Mexico.

Jan. 21, en route.

In morning in North Carolina.
Weather cloudy, cold and threatening.
Passed Atlanta, Ga. in late afternoon.

Jan. 22, en route.

Arrived New Orleans early in
morning. Quite cold for New Orleans.
About 38° at 8 o'clock A.M. and
temperature dropping. Cloudy and
a cold wind blowing. Left at 12:10
P.M. Green leaves noted on some of
the shrubs, and green grass and
herbage in places in the swampy
country traversed in Louisiana.

Arrived at Houston where I stayed
1

Jan. 22 con.

trains. at 10.45 P.M. and left at 11.20
for Austin.

Jan. 23. Austin, Tex.

Arrived here 6.40 A.M. Weather cold,
a snow storm began about 5 A.M.,
and it snowed rather lightly, but
nearly continuously all day, but
checked up in evening when it was
estimated at least 2 inches had fallen.
Snow melting on some of the pavements
about as fast as it fell. Very
unusual weather for Austin.

Went to office of Turner C. Hubby,
Fish and Game Commissioner and
learned he was out of town, but was
called on telephone and I am to
meet him tomorrow.

Jan. 24(Sun.) Austin, Tex.

Heavy snow in morning, but abandoned about 10 A.M. and snow began melting very fast - much of it gone by late afternoon in the town.

Met local T.C. Hubby in late afternoon, had satisfactory conference with him and left at 7 P.M. for Laredo.

Jan. 25(Mon.) Laredo and en route to Mexico.

Crossed the border at 8.30 A.M., and left Nuevo Laredo at 10.55 A.M.

Route as far as Monterrey which was reached in the evening is over generally level plains with mountains rising steeply in places only a few miles. These plains are fairly well overgrown with

Jan. 25 con.
small mesquites, huisaches
(*Acacia farnesiana*) with *Crotonia*
a fairly abundant species in
places. Several species of cacti
and yuccas are also common.

Mountains appear notably south-
west of Villaldama, and appear
to rise to perhaps 4000 feet, their
tops covered with what seemed
to be low-growing timber. These
mountains are precipitous in
places and deeply scored by
steep-sided canyons. Had a
good view of Cerro de la Silla
from Monterrey. The town seems
to be half-encircled by fairly
high mountains, with Cerro de
la Silla in an outlying
group.

Many pepper trees - "arbol del perú" (Bellium mollis) seen along the way most of the day, and while these tend to be most in evidence along fence rows they also grow mingled with the general growth of cacti and tree yuccas which in places become practically forest as a dominant type. A few Taxodium of fairly large size seen along streams.

Jan. 26. in route ~~city~~
of Mexio.

Early in morning we were a short distance south of San Luis Potosí and here and extending far to the southward the rolling, dry plains bear in many places a heavy growth of desert vegetation. Much larger cactuses, including the large nopal - the tuna producing in evidence often towering over the one story native houses along the way. Some of these are picturesquely set in tuna cactus growth close to the walls and tree yuccas also grow close about them. Another large cactus much in evidence is the garambullo. At many points along the way the natives were out in force selling

Jan. 26 con.

oranges, sweet limes, granaditas, and many other things including a few inferior date palms. Some small orchards near railroad stations were heavily loaded with the ripening sweet limes.

Zones, country seen all along the way yesterday and today seems easily assignable to Lower Sonoran zone to a point not definitely determined north of the Valley of Mexico where in reaching a higher altitude the familiar types of desertage disappear, the country becomes more open and grassy and small oaks appear on the slopes of the hills apparently marking the lower edge of Upper Sonoran zone.

6) arrived city of Mexico 8 P.M.

Jan. 27 (Wed), City of
Mexico.

Routine business ~~today~~. Made
two trips to American Embassy.
Saw Ambassador James R. Shaffell
and counselor of Embassy H. F. A.
Schoenfeld.

Jan. 28 (Thurs), City of
Mexico.

Went in morning to Museo Nacional
de Historia Natural and learned that
Prof. Alfonso Herrera is in Oaxaca
and that Dr. Contreras is acting
director in his absence. Went with
Dr. Contreras to the Secretaría de
Agricultura y Fomento and had
a satisfactory conference with
José R. Alcaraz, Director ^{General} de
Cooperación y Peces, and made an

Jan, 28 con.

appointment to meet the Secretario de Agricultura of Toronto tomorrow at noon. In afternoon went again to Museo Nacional and after meeting through Dr. Contreras the ornithologist, Prof. Valentín Santiago, who is to accompany me we visited the zoological park near Chapultepec. In the late afternoon presented a letter from the American Embassy to the Secretario de Relaciones Exteriores, an under secretary who seemed to be very friendly and promised to take the matter of circular letters up with the Secretary and send letters to my hotel.

Jan. 29 (Fri) City of Mexico.

Spent morning in making trips to three principal markets of the city to get information in regard to sale of ducks.

Ducks in market. Four species were found in the markets today. The largest number all told, was in the market of San Juan de Letran where there were about 200 for sale at 10 a.m. Most of them were plucked except for the heads, but a considerable number were unplucked. The species in about equal proportions were Dafila acuta, Spatula clypeata, Duvergierula discors and Nettion carolinus. Part were said to have been brought from Lake Texcoco, and part

Jan. 29, con.

from a place called El Petén.
Market people say they begin
to come in in November and
leave in the latter part of
February. The birds were not
fat.

afternoon devoted to
routine matters. Had a talk
with George Wythe, Am. Commercial
Attaché' of the American Embassy.
Visited Dirección de Estudios
Biológicos and met the Sec.
of the Director, Dr. Leopoldo
Flores and the Administrator
of the office Prof. Marcos Bieira.

Jan. 30 (Sat), 1878, of Mex.
Trip to open water area near El
Píñon.

Ducks. There was no shooting of any kind is permitted by the owner. Ducks were massed on the water giving it a dark color relieved by the white breasts of the ⁷⁵⁰⁰⁰ pintails. Estimated here 50,000 ducks of which about 60% were Querquedula cyanoptera and most of the remainder Dafila acuta, about 25% Querquedula discors and the remainder a sprinkling of Nettion carolinense and Spatula clypeata, and other birds as follows: Fulica americana a few in the edge of the marsh mainly.

Threskiornis budegassius. 1 male flying over ducks, that showed a little

Names furnished by Lopez.

Zarceta coyota } *L. cyanocephala*
" colorada }

Zarcito de verano - *L. discors*,
come early as September, especially ^{Q.}

Zarceta de invierno - *L. caroliniae*.

Jan. 30 con.
uneasiness as it passed, a few
rose a few feet from the water
and settled down again.

Leolemus dominicus, Swung
small gobs apparently of this
species.

Melopogon, a few very sparrows in
flags and a small cane in edge

of water

Perdix keriodias

Pyrrhula vorifrons

Pelcoamus (wh) - About 100. Flying over
valley bottom west of Penon Viejo.

Jan. 31 (Sun), City of
Mexico.

Remained in town - no official
work.

Feb. 1 (Mon), City of Mex.,
Made a trip with guide fur-
nished by the Director Forestal
y de Caza y Pesca to various
points near the old bed of Lake
Texcoco to investigate use of
arrodas. We found however that
the only ones in that section had
been fired early this morning.
A high wind filled the air with
dust and conditions for work
were not very favorable. We
examined the ducks being
brought out by canoe from
one of the arrodas of ~~these~~
ducks ~~these~~ were about 150
about equally divided ~~between~~
pintails, blue-winged teal
and spoonbills, with a few
cinnamon teal. We went on.

Feb. 1 con.

as far as 200 pugs on the
Gulfoceanic R.R. south of Lake
Pescoco near where arvadars
are placed, but owing to high
wind none were in use
today.

Arvadars. Learned from guide
that the arvadars are moved
frequently from one place to
another. A special permit is
required by the operator and
they are authorized to fire
a battery only twice a week.
A battery consists ordinarily of
110 guns, but sometimes double
this number are used.

Ducks. Near Peter I found
opportunity to see again the
place visited Saturday and
found a similarly large

Feb. 1 con
number of birds there. I got the
impression today that there
was perhaps a larger proportion
of pintails. My guide said it
is the only place that ducks
are never shot at. It belongs
to the Lerowantes estate and he
told me that the owner had
refused 300 pesos for permit
to fire a single arnado.

In afternoon saw Mr. C. G. Ray,
who has lived in this country
23 years and is an enthusiastic
hunter and undoubtedly well-
informed. Mr. Ray says ducks
in general are decreasing in
numbers in and about the
Valley of Mexico and he ascribes
this to the use of the "arnadas".
He estimates that there are 50

Feb. 1 con,

armadas in the State which are fired at least once a day and many of them twice a week from the 1st of Nov. to the end of March. As many as 2000 are fired at a discharge, the number of guns being usually about 100 but another 100 is sometimes set above them and all fired simultaneously. Mr. Gay says there are not more than 50 Mexican hunters who hunt for sport, and he does not seem to consider even them real sportsmen. He is not in favor of having enacted a complicated set of game laws that will not be enforced. He favors only 2 measures, the stopping of the use of armadas and the

Feb. 1 con.

hunting of bobwhite quail,
which he says is carried on
on a large scale for market.

Colins, Mr. Ray hunts quail
near Guernavaca. About the 5th

of December last he made a trip
and found that many of the birds
were very small, these being late
hatched young, and he says that
these birds were just becoming
white when he shot yesterday
when he was down there. Formerly
he hunted quail in the Valley
of Mexico, but he says they
are all gone. They are taken
in traps at all seasons for
market, and this should be
stopped, but he does not favor
restricting the season for
shooting.

Feb 1, con.

Mareca americana, Mr. Ray says these ducks occur in rather small numbers.

Anas platyrhynchos, Mr. Ray says he first saw this species about 6 years ago, but they are not very plentiful.

Aristonetta valisineria, Mr. Ray says canvas-backs first appeared about 6 years ago and are becoming rather common.

My guide told me that he found one outfit using an arwoda before the opening of the season, Nov. 1st, and one man threatened him with a gun, but he shot the man through the arm with his pistol. The owner of the arwoda was fined \$500. This was this season.

Feb. 1, 1901

Lake Texcoco has been in process of being drained through the Grand Canal leading to the Laguna of Zumpango for many years. Along the line of the Monterrey and R.R. leading to Los Reyes the embankment now serves to some extent as a dam as shown by the height of the water on the south side along the track and the drained condition on the Lake Texcoco side (south or north east side). Great clouds of whitish dust rise from the vicinity of the old lake bed whenever the wind blows, and this has become troublesome in the city.

Feb. 2.

Name of judge Guaioa arriola.
Started out 8:30 a.m.

Dr. Carlos Lopes tells me
that no one is allowed
that with shot gun within
2000 metros of an arriola
while it is being placed
or within this distance of
its position.

Made trip to vicinity of Largo del
Peñon, but found that owing to
windy weather arriolas had not
been placed.

Feb. 3.

Leptoglossus merriami. Many workers seen in pulque plantations near Zumpango. Soil here is rather sandy, but forms a deep rich, rather dark loam.

Carpodacus m. franklini. Singing about houses at Zumpango. Common here.

Tamias h. exterrit. Several seen along road near Zumpango.

Astonetta valisineria - at least 2000 seen on Lake Zumpango; and about the same number on open water in another lake - Lago de Zumpango. ~~de Zumpango~~ ~~de Zumpango~~
~~de Zumpango~~ ~~de Zumpango~~
de San Mateo.

Feb. 3 (Wed.), City of Mexio. Trip to Zumpango and return. Left City of Mexio ~~at~~ 8:30 A.M. and followed main road by motorcycle and side car through Villa Guadalupe to Zumpango. The Laguna of Zumpango ~~occupies a large~~ part of the bottom of a valley is irregular in outline and several miles in diameter, located in a valley somewhat lower than the Valley of Mexio, like which it is said to have no natural outlet. The water here is not at its highest former level, but is said to be higher than usual owing to abundant rains during the season. A dike across the valley holds the water of a large area that is cultivated to corn and wheat.

Feb. 3 con.

Grand Canal. This canal began in 1879 and completed in 1900 has largely drained the Valley of Mexico and relieved the menace dating from colonial times of the inundation of the city by Lake Texcoco. The canal perhaps a 100 feet deep where it enters a tunnel near Guadalajara was enterprise regarded as a great engineering feat in Diaz' time. It carries the sewage of the city and when I saw it was a swiftly running stream 15 or 20 feet wide and apparently several feet deep. The water is dark and has the usual sewage stench. During ^{or following} heavy rains on it carries a much larger volume of water. It is obviously responsible, along with the canal

Fig. 3 cm.

system leading to it, for the
marked lowering of water which
according to Mr. C. G. Ray has
exposed about 600 square
miles of valley bottom.

Feb. 4, City of Mexia, Mex.
Long trip to various parts of the
valley, including Peñon de los Baños,
and Chalco by motor cycle and
side car.

Left town about 7:30 A.M. and
visited first various points on
the old Lake Texcoco bed near
Peñon de los Baños. Located an
arvoda, but could not examine
it and after waiting about 2 hrs.
in hopes it would be fired my
guide Guaro Arriola took me to
points on the former bed of
Lake Chalco. This included the
former Hda. of Pico formerly
practically an island rising
from the lake. This is a volcanic
hill about 300 feet high. From
this point I had excellent views
over a wide expanse of former

Feb. 4 con.

lake area. Water is now limited to small areas on which there were a larger number of ducks, but there I was unable to approach.

Lake Bales, This large ~~area~~^{lake} is to has been drained except an area of perhaps 100 acres surrounded by marshy ground. Much of the former lake bed has been cultivated, largely in corn and wheat, but during recent years has said to have become unproductive and is largely abandoned. The ~~good~~ soil is dark and one would suppose should be fertile, but although there is plenty of moisture the size of corn stalks, in addition to reports of people is evidence that

Feb. 4. am.

crops do not thrive,

Owing to a broken spring and
the trouble we were obliged to
leave our washing about 10
kilometers out of town and
return in a "canyon".

Feb. 5.

Nyctieorax n. naevius, Several seen in month near Pichon. Also about a dozen noted in trees in Alameda.

Leatherfowl mexicanus Several common were noted in buildings in heart of city. One on National Theater.

Boa constrictor - common bark.

Feb. 5, City of Mex.,
Trip to near Pichon, but was
unable to locate arneda.

Feb. 6. City of Mex.,
Remained in town conferring
with officials.

Feb. 7 (Sun) City of
Mex. No official work.

Feb. 8, City of Mex.

~~Top~~
Anou albifrons, Lofy claims
that this is the goose that
most frequently the valley,
regular ~~soot~~ of Lake Chapala,
of Mex.

Anou hyperborea. Lofy says
arrives here at times in hard
winters, but he has not seen
them except farther north.

Fb, 8 cen.

Chichigualolo's (locums in
(gravel) yellow legs etc.

Come about middle of Aug, ad ^{Sept}
Killed with armadas and nets
Leave and return north in
May.

Bairrada - formerly in
large numbers, but now very
few. ~~Copy~~ thinks they take
a route through Morales
where a road may not
now run. Persecuted much
here. He thinks they have
changed route to avoid per-
secution.

Trip today Pico Viejo. Considerable
change there since for detailed
examination Jan 30. Today found
the following; Dafila acuta
in great preponderance, probably

* * * * *

Feb. 8 con

70% north in abundance
Phragmacia discors 20% - 2.
cyanoptera 5%, Asiotonetta
veloximia 4%, Nettion carolinense
1%.

All of these are more or less
mixed together. Pairs of various
birds often form small groups
by themselves. ~~Cinnamon~~ Dafila
acuta busy feeding, standing
straight on their heads,
leaving backs diving among
them in open water.

Feb. 9 (Tues.), City of Mex.

Made a trip to the shores of River
Vijo where I saw about 100,000
ducks, as I looked over a larger
area than had been visited pre-
viously.

Feb. 9 con.

Ducks. Those seen today were preponderantly Dafila acuta, with L. cyanoptera second, and L. discors third, and a comparatively small number of Aristonetta valisineria.

Dafila acuta, with sun in favorable position these ducks in large numbers present a wonderful sight feeding, standing on their heads, the long tail feathers now growing out projecting nearly straight upward as they balance themselves by paddling with their feet.

Aristonetta valisineria. Their ducks appear scattered among the pintails, swimming and diving, their motions in marked contrast to those of the pintails.

Leucophaea cyanoptera. These swim among the pintails, or in flocks

Feb. 9 con.

by themselves, especially along
the borders of the general mass,
where they often work out among
the coarse vegetation in the
shallower water.

Botaurus lentiginosus, the was
flushed from the marsh at
Pecos Viejo today.

Leucovorax cygnoides, a white
heron that I took to be this
species was seen flying.

Leiolymus nigricollis californicus
A grabe that appeared to be of
this species was seen today
at Pecos Viejo.

Feb. 10 (Wed), left for
Mexico, conferring with officials.
Saw Lopez in morning and had
talk with Mr. C. G. Ray. In afternoon
saw Herrera and identified some mammals.

Feb. 10 am.

for him at Museo Nacional where
I also met his assistant in charge
of mammals, Prof. Alfonso M. Roboada.
Mr. Ray gave information as
follows:

Dafila acuta, arrive from 10 to
15 of Dec. (Ray)

Querquedula discors
Querquedula
Nettion carolinense } First ducks to
in large numbers and greenwings
in smaller numbers. (Ray)

Aristonetta valisineria. Begin to
arrive about middle of Jan. and
increase for some time. (Ray)

Nyroca americana, a few come
along with canvas backs (Ray)

Mareca americana, a few arrive
between Jan. 1 and Jan 15 (Ray).

Anas platyrhynchos, a few arrive
in January. Not seen until about

Feb. 10. con.

6 years ago. (Ray).

Anas - a few black mallards seen during winter, but very rare (Ray) I suppose?

Meleagris. Ray suggests ~~law~~ open season on turkeys should end by March 1st when they begin to gobble he says.

Colinus. Ray suggests open season on quail should be Jan., Feb. & March to ~~also~~ avoid breeding season and shooting of many immature birds.

Ducks. Hunted by many, Ray says 4 ducks 1 man & he thinks 8 men make a crew,

Anser. a. albifrons. Ray says white-fronted geese come pretty regularly as far as Lake Leopold where he has hunted them, but he

Feb. 10 cm.

thinks they leave about Feb. 15,
He has never seen any geese in
the Valley of Mex.

Feb. 11 (Thurs). ~~leaving~~ 87

Mex. Trip in search of arivodas.
Found one being placed near
Penon Viejo, and took pictures.

Arivoda. Mud was built up
about 1 foot above water in semi-
circle as support for 116 guns. Mud
covered with hay. Guns placed
~~about 3 inches apart~~
~~close together~~, all but one were
simply barrels of old muzzle
loaders or small gas pipes about
3/4 inch inside diameter, each was
fastened at base to a piece of
wood used as ~~an~~ anchor.
A few stems of ~~go~~ wedge placed
in muzzles of guns said to
prevent whistling if wind should

Feb. 11 con.

Blow as this scares ducks.
Guns concealed by grass, etc and
laid over them. Fired by train
of black powder connecting all
with central gun which has a
hammer and cap. Train of powder
covered by pieces of sheet iron
laid side by side. Fired by
pulling string several hundred
yds. away. Arwoda showed by
10 min model by a captain.
Ducks sold to dealers at about
12 1/2 cents each. Men grumbled
at my approach, and were evidently
not very anxious that I
should see how work was carried
out.

Feb. 12, 1912, Mrs.

Trip to near Pueblo Viejo
where two arroadas were
fired and pictures finally
secured. Went with ~~Severo~~
Arriola and motorcycle - rode
car very early in morning
to a place where we were
told yesterday one would
be fired.

Arroada. We arrived about
8 a.m. just in time to see
arroada fired and to reach
the ground before the ducks
were gathered. Men surrounded
the area over which the
birds were shot, gathering
birds and closing in
gradually. When they narrowed
the circle to a point just
inside the arroada about
50 crippled ducks were left and

Feb. 12 even,

these were killed by being clubbed - struck over the head with sticks, one grabbed in the water and ~~necks~~ wings. When gathered the birds were tossed into a chalupa, as a canoe is called here. The ducks were largely spoonbills, with considerable proportion of L. discors, guns of which there were 100 here were discontinued by the discharge, some thrown backward into the water. Ducks killed about 500.

Arvada, at another arvada - this one located yesterday when it was being arranged, I found about ^{9 o'clock} noon that the river was overflowing from the ditch banks within about 400 yards. About

Feb. 12 con.

2000 pintails were grouped
in lines and bunches in ~~the shallows~~
water about 2-3 feet deep, in
which coarse sedges were growing.
A considerable number was
in front of the guns and within
range, but others were being
very slowly herded in by men
using 2 horses which were led
along the ~~was~~ walking on
the outer side near the horses
shoulder. Very slowly and
carefully the ducks were
rounded up, the men with
the horses making long stops
in places and waiting for
the birds to move slowly
in the direction desired. This
operation took about 3 hours,
the armada being feed at
11:30 A.M. I had arranged for

Feb. 12 em.

a canoe to ~~the~~ take me to the
point where the arroda was
located, but the river closed in
so rapidly I did not reach it
until the ducks had been
gathered. Second photos of ducks
in canoe, and of the general
excitement following the firing of
the arroda, about 500 ducks were
killed, all of them pintails. 10
men were partners in this
arroda, under one of ~~of~~ them
number, called the captain.
The horse used in herding
ducks is called the "Sancho".
One of the owners explaining to me
that 2 pintails are counted as
a "mano", but it takes 3 pintails
and 4 teal to count as a mano,
Eight manos are one "cuarto" and
a total number of cuartos make up

Feb. 12 con.

the hill. The birds are gathered and counted in this way, and then divided among the "socios". Purchasers sometimes take the birds on the ground, ~~and~~ The price paid varies widely and I was unable to get very definite information as the interested were reluctant to talk or furnished what I believed to be misinformation. In the market about 90 cents is asked for pintails. Teals are worth about 40. Pintails offered for 75. //

Puñon Viejo. Many ducks still on large charcos at this point. Those seen today largely pintails and 2. divers. //

Feb. 13, City of Mex.

Day spent in getting routine
out of way. Went to Museum
and identified a number of
mammals for Herrera.

Feb. 14 City of Mex.

Trip to Grutas del Teulito, with
Erriola. Also to Tobe Kochimiles.
Grutas del Teulito are caves in
the side of a volcanic cone
about 1000 feet high (above the
valley) near Tuxehuacan.

Leptonycteris nivalis. This species
in a colony of hundreds lives in
summer in ~~the~~ one of the Grutas
del Teulito, but evidently migrates
in winter as we found no very
recent signs of their occurrence.

Kochimiles. Examined propagating
gardens of Dept. of Agriculture, as the

Feb 14 con.

point where trees and plants of various kinds are grown for distribution said to be largely to agricultural schools. The chinampas are now far lands, the water being much lower than formerly. The city water supply comes from large springs formerly under Lake Xochimilco which has now been drained. A fine water plant to supply the city was finished in 1910 at a cost of 17 million pesos. This includes a pumping plant to provide sufficient pressure to carry the water in large volume to the city. Salix pyramidalis is the tall willow growing so abundantly in the bed of Lake Texcoco according to man in charge of the gardens of the city of Mex - Southern

Feb. 16, city of Mex,
Principal day of carnival and
everything closed.

Feb. 17, city of Mex. to
Lerma.

Left Mexico 3 P.M.; arrived Lerma
5.38. Train climbed over ^{Sierra} ~~lomas~~ de
las Cerezas.

Junes. Passed through pine belt,
including modern's evidently
transition. Upper slopes in fir
and spruce, *Elmudia*, and
on descending into Valley of Tolosa
noted that pines went well
down toward valley bottom.

Feb. 18, Lerma

Trip by canoe. Lerma river
much choked by water
by acacia,

Melosiphia

43 *Colamogtia* - bent for cow food.

Feb. 18 con. ~~NOT~~

Pocholpohes pod. ~~NOT~~
Anas diazi - has real local
name. Said to remain all year.
A pair flushed from trees.
Also seen in small flocks of
20 to 40.

Geek & wings - agachona - flushed
over from marsh. Said to
be common in places and
remain all winter.

Pintail, Said to be most com.
duck, about 3000. "golondrina"

Mareca americana, several seen.
Local names "pavares" and
"socanathi".

Longtailed coot. About 2000.

Spontiel. A few. Local name
"Bocor" and cuarumino.

Longtailed discos, a considerable
number.

Feb. 18 con.

Leaves back - Three - local
name "craes"

Green-winged teal, Said to stay
over, but not flushed out by
me. Local name "golondrinita"

Teal - about 2000, local name
"gallreta"

Rein. sp. local name "sarcita"
"coyota"

L. cyanopt.

Spontiel

Leaves back

L. discors

Pintails - leave in Feb.

Duck

L. discors - sarcita tulara

About ducks seen before de la
Manga, north of Lirua a provinc.

Grotchypis

Barn Swallow

lhericus mol.

Feb. 18 con.

Men of Bases de la Manza
preparing an armada.

60 large ducks are called a
"monton" = 30 monos. Now about
4 or 5 montons are killed by an
armada discharge, but at times
15 or 20 montones.

Ducks are said to have been
unusually few that year.

Ducks buyers pay about $\frac{1}{2}$ a
monton = 60 ducks.

Gallinas are also killed and
count 3 to a mono.

About 10 or 12 armadas used
near Tarma.

Feb. 18 con.

Effect of water on birds; In
valley of Huay. it is believed that
tequis grits or mineral salts
in water purge birds and give
them good flavor. But in
valley of Polvora they claim that
the birds are better because the
water is cleaner. They say that
birds with white bellies have
these stained in Valley of Huay.
white here the birds have
maintain pure white bellies.

Marsh, formed of a number of
lakes and certain flocks - lakes
about 8 ft. above water - interrupted
by patches of various species of
sedges.

Lestothomus, a few marsh
wrens seen & heard giving a few
gutting notes.

Feb. 19 (Fri.), Léma D.
Acarbose.

Left Léma 9:55 a.m., down at
Tutuway, County high to this
point, level or gently rolling
grassy plains, with numerous
rises in groups on the horizon,
Oak timber and a few pines
thinned down to within 500 ft.
Of the general level in places,
Near Tutuway we pass through
a cañon with oaks along
the base and drop rapidly
several hundred feet,

Valley of Póice, where soil
consists largely a loam
glac. of Léma Co., with
cactus for older ages,

Zones, Upper Son Cha., of
Valley of Póice indicated by
absence of pappus, leaves and

Feb 19 son

near Tutuway, valley with
large watercress, appear at
the head in valley. Ranch
trees of several kinds in bloom.
Some flowering plants have
not been identified, many
small shrubs and flowers.

Banana, Frosted off Léma,
left off early and entirely
frosted.

Zones, Top Tongo (alt 2200) still
Upper Son, just a short distance north
soil runs down rapidly into
lower country consisting of high
grass with ^{some} ~~some~~ ^{small} ~~small~~ ^{thin} ~~thin~~
trees and acacia, thickets of
large Opuntia and a few ~~of~~ ^{of} other
trees noted near Maizaca. Hills now
rise in upper Son,

avas platyrhyncha platyrhyncha
avas diogi
avas rubripes neovariolosa
leucostethus strophurus.
Mareca americana
Nettion carolinense
Querquedula discors
Querquedula cyanoptera
Spatula clypeata
Safila a. tzitzikosa
Nyroca americana - wldhead
Aristonetta valisineria
Fulix warila - scoup
Fulix affinis - green scoup

Abies balsamea Lipp. - Snow wood
" " *nivalis* - ~~Snow~~ ⁺ snow wood
Abies roissi -
Abies a. alba f. *albiflora*
Brauneria c. evadensis

Final Matter.

200.1. P. 25 Smith wants to stop
at a Bowling of with the
Captains of oil. Texas had
S. and I. also and I was
not pleased that the
oil field was to be
done.

200.2. Feb. 23. 1924
Smith and Captains and
I were to have the
oil field (Cushing, Okla.)

200.3. It is Sept. 1924 to stop
(and in Lake City, Okla.)
I was to have the oil
oil field again for the
The Captains and I
1000s of miles and to stop
from the oil field to the 1000s
of oil fields. And Smith
will go with me to the

594

Feb 10. Saw in land
water as far south as Fortofola

Blue wing = Zarceta de cruce

Bartola dove (garza) comes
about middle of Aug. and remains
about a month on way south. Returns
middle of May.

Dec. 28, 1925 - Smith wrote
Kurt, referring to letter from him
and saying it was surprising that
he should have no place in
the revolution to a friendly party.
Kurt offered jail of San Joseph
etc.

Permit issued on behalf of
of Swift Oct. 2, 1925 this
was letter, up passed by a friend
for Kavosha of Poland.

1 Kurt Swift - along with
of friends and many others
met at San Joseph Jan. 6, 1925.